

IN THE CLAIMS

Please cancel claims 6 through 9 and 16 through 29.

Please add the following new claims.

-- 30. A recombinant plasmid wherein a DNA which codes  
~~at least~~ for the amino acid sequence:

Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser  
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg  
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg  
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu  
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile  
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser  
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val  
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu  
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys  
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser  
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr  
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

is inserted in a vector DNA.

31.4 The recombinant plasmid according to claim 30  
wherein said inserted DNA comprises ~~at least~~ the following base  
pair sequence:

1230X  
E  
1 (cont.)

ATG	ACC	AAC	AAG	TGT	CTC	CTC	CAA	ATT	GCT	CTC	CTG	TTG	TGC	TTC	TCC
TAC	TGG	TTG	TTC	ACA	GAG	GAG	GTT	TAA	CGA	GAG	GAC	AAC	ACG	AAG	AGG
ACT	ACA	GCT	CTT	TCC	ATG	AGC	TAC	AAC	TTG	CTT	GGA	TTC	CTA	CAA	AGA
TGA	TGT	CGA	GAA	AGG	TAC	TCG	ATG	TTG	AAC	GAA	CCT	AAG	CAT	GTT	TCT
AGC	AGC	AAT	TTT	CAG	TGT	CAG	AAG	CTC	CTG	TGG	CAA	TTG	AAT	GGG	AGG
TCG	TCG	TTA	AAA	GTC	ACA	GTC	TTC	GAG	GAC	ACC	GTT	AAC	TTA	CCC	TCC
CTT	GAA	TAT	TGC	CTC	AAG	GAC	AGG	ATG	AAC	TTT	GAC	ATC	CCT	GAG	GAG
GAA	CTT	ATA	ACG	GAG	TTC	CTG	TCC	TAC	TTG	AAA	CTG	TAG	GGA	CTC	CTC
ATT	AAG	CAG	CTG	CAG	CAG	TTC	CAG	AAG	GAG	GAC	GCC	GCA	TTG	ACC	ATC
TAA	TTC	GTC	GAC	GTC	GTC	AAG	GTC	TTC	CTC	CTG	CGG	CGT	AAC	TGG	TAG
TAT	GAG	ATG	CTC	CAG	AAC	ATC	TTT	GCT	ATT	TTC	AGA	CAA	GAT	TCA	TCT
ATA	CTC	TAC	GAG	GTC	TTG	TAG	AAA	CGA	TAA	AAG	TCT	GTT	CTA	AGT	AGA
AGC	ACT	GGC	TGG	AAT	GAG	ACT	ATT	GTT	GAG	AAC	CTC	CTG	GCT	AAT	GTC
TCG	TGA	CCG	ACC	TTA	CTC	TGA	TAA	CAA	CTC	TTG	GAG	GAC	CGA	TTA	CAG
TAT	CAT	CAG	ATA	AAC	CAT	CTG	AAG	ACA	GTC	CTG	GAA	GAA	AAA	CTG	GAG
ATA	GTA	GTC	TAT	TTG	GTA	GAC	TTC	TGT	CAG	GAC	CTT	CTT	TTT	GAC	CTC
AAA	GAA	GAT	TTC	ACC	AGG	GGA	AAA	CTC	ATG	AGC	AGT	CTG	CAC	CTG	AAA
TTT	CTT	CTA	AAG	TGG	TCC	CCT	TTT	GAG	TAC	TCG	TCA	GAC	GTG	GAC	TTT
AGA	TAT	TAT	GGG	AGG	ATT	CTG	CAT	TAC	CTG	AAG	GCC	AAG	GAG	TAC	AGT
TCT	ATA	ATA	CCC	TCC	TAA	GAC	GTA	ATG	GAC	TTC	CGG	TTC	CTC	ATG	TCA
CAC	TGT	GCC	TGG	ACC	ATA	GTC	AGA	GTG	GAA	ATC	CTA	AGG	AAC	TTT	TAC
GTG	ACA	CGG	ACC	TGG	TAT	CAG	TCT	CAC	CTT	TAG	GAT	TCC	TTG	AAA	ATG
TTC	ATT	AAC	AGA	CTT	ACA	GGT	TAC	CTC	CGA	AAC					
AAG	TAA	TTG	TCT	GAA	TGT	CCA	ATG	GAG	GCT	TTG					

C  
C

32.9

A recombinant plasmid wherein a DNA which codes ~~at~~  
~~least~~ for the amino acid sequence:

T240X

(cont.)

C

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln  
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu  
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln  
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln  
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn  
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn  
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr  
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg  
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser <sup>His</sup> ~~Asp~~ Cys Ala Trp Thr  
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu  
Thr Gly Tyr Leu Arg Asn

is inserted in a vector DNA.

24

<sup>12</sup>  
33. The recombinant plasmid according to claim <sup>91</sup>32 wherein  
said inserted DNA comprises ~~at least~~ the following base pair sequence:

T250X  
(cont.)

ATG	AGC	TAC	AAC	TTG	CTT	GGA	TTC	CTA	CAA	AGA	AGC	AGC	AAT	TTT	CAG
TAC	TCG	ATG	TTG	AAC	GAA	CCT	AAG	GAT	GTT	TCT	TCG	TCG	TTA	AAA	GTC
TGT	CAG	AAG	CTC	CTG	TGG	CAA	TTG	AAT	GGG	AGG	CTT	GAA	TAT	TGC	CTC
ACA	GTC	TTC	GAG	GAC	ACC	GTT	AAC	TTA	CCC	TCC	GAA	CTT	ATA	ACG	GAG
AAG	GAC	AGG	ATG	AAC	TTT	GAC	ATC	CCT	GAG	GAG	ATT	AAG	CAG	CTG	CAG
TTC	CTG	TCC	TAC	TTG	AAA	CTG	TAG	GGA	CTC	CTC	TAA	TTC	GTC	GAC	GTC
CAG	TTC	CAG	AAG	GAG	GAC	GCC	GCA	TTG	ACC	ATC	TAT	GAG	ATG	CTC	CAG
GTC	AAG	GTC	TTC	CTC	CTG	CGG	CGT	AAC	TGG	TAG	ATA	CTC	TAC	GAG	GTC
AAC	ATC	TTT	GCT	ATT	TTC	AGA	CAA	GAT	TCA	TCT	AGC	ACT	GGC	TGG	AAT
TTG	TAG	AAA	CGA	TAA	AAG	TCT	GTT	CTA	AGT	AGA	TCG	TGA	CCG	ACC	TTA
GAG	ACT	ATT	GTT	GAG	AAC	CTC	CTG	GCT	AAT	GTC	TAT	CAT	CAG	ATA	AAC
CTC	TGA	TAA	CAA	CTC	TTG	GAG	GAC	CGA	TTA	CAG	ATA	GTA	GTC	TAT	TTG
CAT	CTG	AAG	ACA	GTC	CTG	GAA	GAA	AAA	CTG	GAG	AAA	GAA	GAT	TTC	ACC
GTA	GAC	TTC	TGT	CAG	GAC	CTT	CTT	TTT	GAC	CTC	TTT	CTT	CTA	AAG	TGG
AGG	GGA	AAA	CTC	ATG	AGC	AGT	CTG	CAC	CTG	AAA	AGA	TAT	TAT	GGG	AGG
TCC	CCT	TTT	GAG	TAC	TCG	TCA	GAC	GTG	GAC	TTT	TCT	ATA	ATA	CCC	TCC
ATT	CTG	CAT	TAC	CTG	AAG	GCC	AAG	GAG	TAC	AGT	CAC	TGT	GCC	TGG	ACC
TAA	GAC	GTA	ATG	GAC	TTC	CGG	TTC	CTC	ATG	TCA	GTG	ACA	CGG	ACC	TGG
ATA	GTC	AGA	GTG	GAA	ATC	CTA	AGG	AAC	TTT	TAC	TTC	ATT	AAC	AGA	CTT
TAT	CAG	TCT	CAC	CTT	TAG	GAT	TCC	TTG	AAA	ATG	AAG	TAA	TTG	TCT	GAA
ACA	GGT	TAC	CTC	CGA	AAC										
TGT	CCA	ATG	GAG	GCT	TTG										

<sup>13</sup>  
34.5 The recombinant plasmid according to claim <sup>11</sup>30 wherein  
said vector DNA is an Escherichia coli plasmid.

<sup>13</sup>  
35. The recombinant plasmid according to claim <sup>91</sup>32 wherein  
said vector DNA is an Escherichia coli plasmid.

<sup>36.4</sup> C The recombinant plasmid according to claim <sup>34.5</sup> wherein said Escherichia coli plasmid is selected from the group consisting of pBR 322, pCR1<sup>and</sup> pMB9 ~~and pSC1~~.

<sup>37.14</sup> C The recombinant plasmid according to claim <sup>35.13</sup> wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCR1<sup>and</sup> pMB9 ~~and pSC1~~.

<sup>38.15</sup> C A process for preparing a recombinant plasmid which comprises inserting a synthesized double stranded DNA which codes for ~~at least~~ the amino acid sequence:

T260X  
(cont.)  
Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser  
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg  
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg  
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu  
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile  
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser  
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val  
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu  
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys  
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser  
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr  
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

in a vector DNA.

<sup>18</sup>  
39. A process for preparing a recombinant plasmid which comprises inserting a synthesized double stranded DNA which codes for ~~at least~~ the amino acid sequence:

T270X  
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln  
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu  
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln  
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln  
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn  
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn  
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr  
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg  
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser Ais Cys Ala Trp Thr  
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu  
Thr Gly Tyr Leu Arg Asn

(B' cont.)  
in a vector DNA.

<sup>14</sup>  
40. The process according to claim <sup>15</sup>38 wherein said vector DNA is an Escherichia coli plasmid.

<sup>18</sup>  
41. The process according to claim <sup>18</sup>39 wherein said vector DNA is an Escherichia coli plasmid.

<sup>17</sup>  
42. A process according to claim <sup>16</sup>40 wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCR1, <sup>and</sup> pMB9 ~~and~~ pSC1.

<sup>20</sup>  
43. A process according to claim <sup>19</sup>~~41~~ wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCRL <sup>and</sup> pMB9 ~~and pSC1~~.

<sup>21</sup>  
44. A process for producing a microorganism capable of expression of a polypeptide with interferon activity which comprises transforming a host microorganism with a replicable recombinant plasmid containing a foreign DNA which codes ~~at least~~ for the amino acid sequence:

7280X Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser  
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg  
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg  
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu  
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile  
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser  
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val  
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu  
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys  
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser  
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr  
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn.

<sup>24</sup>  
45. A process for producing a microorganism capable of expression of a polypeptide with interferon activity which comprises transforming a host microorganism with a replicable re-combinant plasmid containing a foreign DNA which codes ~~at least~~ for the amino acid sequence:

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln  
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu  
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln  
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln  
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn  
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn  
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr  
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg  
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser <sup>His</sup> ~~His~~ Cys Ala Trp Thr  
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu  
Thr Gly Tyr Leu Arg Asn.

<sup>22</sup>  
46. A process according to claim <sup>21</sup>44 wherein said host microorganism is Escherichia coli x1776.

<sup>25</sup>  
47. A process according to claim <sup>24</sup>45 wherein said host microorganism is Escherichia coli x1776.

<sup>23</sup>  
48. A process according to claim <sup>21</sup>44 wherein said recombinant plasmid is TpIF 319-13. --

Claim 11, line 2, change "6" to -- 30 --.

Claim 12, line 2, change "7" to -- 32 --.